4.9 HAZARDS AND HAZARDOUS MATERIALS

The analysis contained in this section is based on a *Hazardous Materials and Soil Quality Investigation* prepared by *TRC Lowney* in February 2006 for accessible properties within the CVSP Development Area. The assessment is included as Appendix K of this EIR. Other previous investigations were also used to prepare the hazardous materials investigation. These investigations are incorporated by reference in Appendix K.

4.9.1 Introduction and Regulatory Framework

Hazardous materials encompass a wide range of substances, some of which are naturally-occurring and some of which are man-made. Examples include pesticides, herbicides, petroleum products, metals (e.g., lead, mercury, arsenic), asbestos, and chemical compounds used in manufacturing. Determining if such substances are present on or near project sites is important because, by definition, exposure to hazardous materials above regulatory thresholds can result in adverse health effects on humans, as well as harm to plant and wildlife ecology.

Due to the fact that these substances have properties that are toxic to humans and/or the ecosystem, there are multiple regulatory programs in place that are designed to minimize the chance for unintended releases and/or exposures to occur. Other programs set forth remediation requirements at sites where contamination has occurred. Table 4.9-1 summarizes many of these regulations. For more details on the regulations and the legislation on which they are based, please see Appendix K.

In addition to the above regulations, various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating hazardous materials impacts resulting from planned urban development within the City. All future development addressed by this EIR will be subject to the hazardous materials policies listed in Chapter 4, *Goals and Policies*, of the City's General Plan, including the following:

- *Hazardous Materials Policy #1*: Proper storage and disposal of hazardous materials should be required.
- *Hazardous Materials Policy #3*: Soil and groundwater quality should be evaluated when considering development proposals.
- *Fire Hazards Policy #3*: Hazards from wildland fires should be minimized.
- *Fire Hazards Policy #6*: Emergency access and evacuation routes for new development should be provided.
- *Soil and Geologic Conditions Policy #9*: Agricultural and industrial soils should be tested and remediated prior to use for residential development.

4.9.2 Existing Conditions

The CVSP Area is located in an area of past and present agricultural uses; therefore, hazardous materials may be present in surface and subsurface soils and groundwater on properties that are associated with agricultural uses. Hazardous materials associated with agricultural activities include pesticides, herbicides, fertilizers, and heavy metals.

The CVSP Development Area was evaluated for the purpose of determining whether hazardous materials are present or likely to be present. The Hazardous Materials and Soil Quality Investigation included the following:

- a review of federal, state, and local agency databases and files to identify sites both within and surrounding the CVSP area that have reported the generation, use, storage, and/or release of hazardous materials;[43] and
- a review of any previous environmental investigations for the subject properties; and
- a review of the historical uses of the subject properties and surrounding areas; and
- an inspection of the subject properties and adjacent sites; and
- collection and laboratory analyses of soil samples from some of the accessible subject properties within the CVSP Development Area.

TABLE 4.9-1
REGULATION OF HAZARDOUS MATERIALS

Agency	Responsibilities
U.S. Environmental Protection Agency (EPA)	Oversees Superfund sites; evaluates remediation technologies; develops standards for hazmat disposal & cleanup of contamination; implements Clean Air & Clean Water Acts.
U.S. Department of Transportation (DOT)	Regulates and oversees the transportation of hazardous materials.
U.S. Occupational Safety & Health Administration (OSHA)	Implements federal regulations and develops programs & procedures regarding the handling of hazardous materials for the protection of workers.
CA Department of Toxic Substances Control	Authorized by EPA to implement & enforce various federal hazmat laws & regulations, implements state hazardous materials regulations; oversees remediation of contamination at various sites.
CA Occupational Safety & Health Administration (Cal/OSHA)	Implements state regulations and develops programs & procedures regarding the handling of hazardous materials for the protection of workers.
CA Air Resources Board/ Bay Area Air Quality Management District	Regulates emissions of toxic air contaminants & requires information regarding the risk of such emissions to be available to the public.
CA Water Resources Control Board/Regional Water Quality Control Board	Regulates the discharge of hazardous materials to surface and groundwaters; oversees remediation of contamination at various sites.
Santa Clara County Department of Environmental Health	Oversees & enforces state/local regulations pertaining to hazardous waste generators and risk management programs, including the California Accidental Release Program. Implements Local Oversight Program (LOP) for the leaking underground storage tank clean-up program.
Santa Clara Valley Water District	Responsible for groundwater protection; oversees remediation of contamination at various sites.
City of San José Fire Department	Implements City's Toxic Gas and Hazmat Storage Ordinances; requires businesses that use or store hazmat to prepare a management plan; regulates installation & removal of above- and below-ground storage tanks; reviews plans for compliance with the Uniform Fire and the Flammable & Combustible Liquids Codes.

[43] The regulation of hazardous materials involves all levels of government, including the U.S. Environmental Protection Agency (EPA), the California Department of Toxic Substances Control, the Regional Water Quality Control Board, the Santa Clara Valley Water District, Santa Clara County Department of Environmental Health, and the City of San José Fire Department. These agencies maintain databases and files for the purpose of tracking the manufacture, transport, use, storage, and disposal of these substances. For details, please see Appendix J.

4.9.2.1 *Historical Review*

To evaluate historic uses and changes in development over time within the CVSP Area and the immediately surrounding area, aerial photographs were reviewed. A discussion of historic pesticide use is also included in this section, below.

Historical Photos

To evaluate historic uses of the CVSP Area and immediate vicinity, aerial photographs from 1939, 1956, 1965, 1982, and 1993 were reviewed. In 1939, the area was primarily agricultural, dominated by row crops and orchards. Monterey Road, the Southern Pacific Railroad line and depot, Fisher and Coyote Creeks, the gravel plant within the banks of Coyote Creek, and Encinal School are all visible. Most other roadways appear to be unpaved. While some structures including homes are visible, no nurseries, greenhouses, or commercial/industrial developments are visible. A gravel plant in Coyote Creek east of Monterey Road is visible.

In the 1956 photo, the PG&E substation near Metcalf Road is visible; however, the gravel plant in Coyote Creek is no longer visible. More residences can be seen and it appears that a small reservoir is located near some of the residences on Richmond Avenue approximately 1,200 feet southwest of the UPRR tracks. In the 1965 photo, greenhouses and warehouses can be seen, as well as a golf course on the east side of Coyote Creek. Gravel extraction operations with water filled pits are visible in a strip parallel to and east of Monterey Road, east of Amado Road. Several structures that appear to be small guest or worker houses are also visible on Richmond Avenue.

In the 1982 photos, Highway 101 is under construction. A golf course appears to be under construction to the south of Bailey Avenue, west of Santa Teresa Boulevard. More residences, commercial development, and greenhouses are visible. The 1993 photos show US 101 completed, the PG&E substation expanded, and additional development of residential, nursery, and greenhouse uses primarily along Monterey Road, and in the San Bruno and Dougherty Avenue areas. The 2001 photos show the completion of the Scheller Avenue (Coyote Creek Golf Course Drive) interchange, additional structures along Monterey Road and the expansion of the Coyote Creek Golf Course to the eastern side of the US 101.

History of Pesticide Use

The Santa Clara County Agricultural Commissioner's office was consulted to determine the history of pesticide and herbicide use (including DDT) within the CVSP Area. DDT was first used in California around 1945 for controlling agricultural pests, cockroaches, and mosquitoes. The use of DDT was banned in California in 1972. Other pesticides and herbicides such as lead arsenate, dieldrin, endosulfan, endrin, and others were also likely applied to fields and orchards. Various concentrations of these pesticides and herbicides are likely to be found in the soil of the CVSP area due to past and present agricultural uses.

4.9.2.2 *Field Review*

A site reconnaissance was completed within the CVSP Area to note readily observable indications of present or past activities that may have or could cause site contamination. Observations were done on accessible properties and from publicly accessible areas. Table 1 in Appendix K lists properties where potential hazardous materials were readily observed during the field review. These properties are also shown on Figure 2 of Appendix K.

Numerous properties throughout the CVSP Area were observed to be in use for agricultural purposes. These properties were observed as fallow or in use for pasture, orchards, vineyards, row crops, or planted with crop cover such as alfalfa, oats, hay, beans, gourds, bell peppers, and other crops. Plant nurseries with greenhouses were also observed within the CVSP Area. Above-ground Storage Tanks (ASTs), which may have contained pesticides, water tanks, and farming machinery were observed at many of the agricultural properties. Storage yards for farming machinery, storage buildings, equipment, and miscellaneous items such as pipes and wood pallets, were also observed. Water and propane tanks and water wells were observed at many of the residential properties located within the CVSP area. Residential and commercial uses within the CVSP area use septic leach field systems for sewage disposal. These septic systems can be a source of contamination if they are used for the disposal of hazardous materials.

Other observed uses within the CVSP Area with the potential for hazardous materials use or contamination include warehouses, a lumber yard, trucking and construction companies, and automobile repair. The IBM Santa Teresa Laboratory and a Pacific Bell facility are located along Bailey Avenue. Mounds of fill associated with agricultural operations were observed in many locations within the CVSP area. This fill could contain contaminants.

4.9.2.3 *Regulatory Agency Database Report*

A regulatory database report was obtained and reviewed for the entire CVSP Area and the surrounding area to identify sites where contamination incidents have been reported. A listing of the databases searched and the properties with hazardous materials issues are described in detail in Appendix K and summarized below. Only those sites with significant hazardous materials issues are listed in Table 4.9-2 and shown on Figure 4.9-1. These sites were also visited during the field review to determine their current status and use.

TABLE 4.9-2:
POTENTIAL HAZARDOUS MATERIALS CONCERNS

Map ID #	Facility	Address	Potential Concern
5º	United Technologies	Station 635 and Station 706	Facility listed on databases indicating site of potential concern regarding presence of hazardous materials; no further information available. Facility is located at least a mile to the east of the CVSP Area and is currently in the process of being closed.
6*	PG&E Substation	150 Metcalf Road	Fuel LUST site impacting soil - case closed in June 1993 but residual contamination may remain in soil. Hazardous materials user and/or hazardous waste generator.
7*	PG&E	100 Metcalf Road	Hazardous materials user and/or hazardous waste generator. AST present on-site.
9▫	Frost Farms	8194 Monterey Road	Fuel LUST impacting soil and ground water – case closed in November 1996 but residual contamination may remain in soil and ground water.
10▫	DJP Agriculture Supply Co.	611 Blanchard Road	UST historically present on-site, may currently be present.
11▫	Universal Gas	8125 Monterey Road	Fuel LUST impacting soil – case closed April 2001 but residual contamination may remain in soil.

TABLE 4.9-2:
POTENTIAL HAZARDOUS MATERIALS CONCERNS

Map ID #	Facility	Address	Potential Concern
11▪	Joe's Gas, Bait and Tackle	8145 Monterey Road	Numerous reported fuel LUSTs impacting soil and ground water – all cases appear closed by January 1997 but residual contamination may remain in soil and ground water. Hazardous materials user and/or hazardous waste generator. USTs historically present on-site, may currently be present.
11▪	---	8149 Monterey Road	Stained soil beneath cutting dock of railroad tracks; releases reportedly occurred over 10-year period.
11▪	Steve Klesitz Abandoned Service Station	101 Monterey Road	Hazardous materials user and/or hazardous waste generator. AST present on-site.
12▪	Pacific Bell	205 Bailey Avenue	AST present on-site.
13▪	Pacific Bell	451 Bailey Avenue	Hazardous materials user and/or hazardous waste generator. UST historically present on-site, may currently be present.
14▪	Unocal	510 Bailey Road	Fuel LUST– case closed November 1996 but residual contamination may remain.
15▪	IBM	555 Bailey Road	Hazardous materials user and/or hazardous waste generator.
16▪	Ivan Scorsur	510 Dougherty Avenue	USTs historically present on-site, may currently be present.
16▪	The Fuzz Farm, Inc.	539 Dougherty Avenue	USTs historically present on-site, may currently be present.
16▪	Albert Aquilar Jr./Aquilar Trucking	535 Dougherty Avenue	UST historically present on-site, may currently be present. Hazardous materials user and/or hazardous waste generator. AST present on-site. Fuel LUST impacting soil – case closed June 1996 but residual contamination may remain in soil.
16▪	Richard De Leeuw	517 Dougherty Avenue	USTs historically present on-site, may currently be present.
17◦	Kirby Canyon Landfill	Scheller Avenue at Highway 101	Class III landfill accepting non-hazardous solid waste. Indicated as being a moderate threat to ground water quality if a release were to occur from the facility.
18▪	Louis Romano	Richmond Avenue	UST currently present on-site.
19▪	Riverside Golf Course	9770 Monterey Road	Fuel LUST impacting soil – case closed December 1990 but residual contamination may remain in soil.
20▪	Bonner Packing Co.	550 Monterey Road	Fuel LUST impacting soil – case closed April 2001 but residual contamination may remain in soil.
23▪	Grandy Residence	195 Scheller Avenue	UST historically present on-site, may currently be present. Fuel LUST impacting soil – case closed August 1991 but residual contamination may remain in soil.

TABLE 4.9-2: POTENTIAL HAZARDOUS MATERIALS CONCERNS			
Map ID #	**Facility**	**Address**	**Potential Concern**
24*	Aita Nursery	9825 Dougherty Drive	UST historically present on-site, may currently be present.
25▫	James Masuda	Corner of Palm/Lance	Hazardous materials user and/or hazardous waste generator.
26*	Bonner Packing/ Parkway Lanes	100 Ogier Avenue	Fuel LUST impacting soil – case closed January 1991 but residual contamination may remain in soil.
27*	Filice Estates Vineyards	10270 Monterey Road	Fuel LUST impacting soil – case closed December 1989 but residual contamination may remain in soil.
28*	Rainbow Press	19715 Hale Avenue	Hazardous materials user and/or hazardous waste generator.
28*	Woodcrafting	19715 Hale Avenue	Facility listed on database indicating site of potential concern regarding presence of hazardous materials; no further information available.
29*	---	Dougherty Avenue/San Bruno Avenue	Former drug lab with associated hazardous materials removed and disposed.
30*	Tilton Ranch	19665 Hale Avenue	USTs historically present on-site, may currently be present.
31*	Roy Kikunaga	RR 2. Box 542 B Miramonte Avenue	UST historically present on-site, may currently be present.
32*	Muriel, Winfield, and Norma Johnson	10369 Dougherty Avenue	Hazardous materials user and/or hazardous waste generator.
33*	Inland Truss North, LLC	10384 Dougherty Avenue	Hazardous materials user and/or hazardous waste generator.
34*	Sierra Precast, Inc.	1 Live Oak Avenue	Hazardous materials user and/or hazardous waste generator. Fuel LUST impacting soil – case closed April 1996 but residual contamination may remain in soil.
35*	Recreational Vehicle Services, Inc.	10900 Monterey Road	Hazardous materials user and/or hazardous waste generator.
36*	Former Hudson Gas Station	10950 Monterey Highway	Gas LUST impacting soil and ground water from February 1988 release.
37*	Wheeler Transportation	10492 Dougherty Avenue	Hazardous materials user and/or hazardous waste generator.

TABLE 4.9-2:
POTENTIAL HAZARDOUS MATERIALS CONCERNS

Map ID #	Facility	Address	Potential Concern
38º	Madrone Closed Landfill Site	2500 feet northeast of Kirby/Nicholis Streets	Closed solid waste landfill.
39*	G&K Farms of California	280 Live Oak Avenue	USTs historically present on-site, may currently be present.
41*	Hallmark Equipment Co.	11040 Monterey Highway	Hazardous materials user and/or hazardous waste generator.
42*	Redwood Empire, Inc.	10 Madrone Avenue	Fuel LUST impacting soil – case closed January 1996 but residual contamination may remain in soil.
43º	Kawahara Nursery	698 Burnett Avenue	Hazardous materials user and/or hazardous waste generator. AST currently present on-site. Surface release of ammonia urea during structure fire.
44*	Frank Fujita Farms	528 Live Oak Avenue	Fuel LUST impacting soil – case closed June 1996 but residual contamination may remain in soil. Active UST present on-site. USTs historically present on-site, may currently be present.
44*	Emily Fantozzi Trust	526 Live Oak Avenue	Hazardous materials user and/or hazardous waste generator.
44*	Tellez Property	545 Live Oak Avenue	Fuel LUST impacting soil – case closed November 1990 but residual contamination may remain in soil.
44*	Pensina Brothers Live Oak Farms	547-A Live Oak Avenue	UST historically present on-site, may currently be present.
45*	Foster Group Partnership	9605 Monterey Highway	Fuel LUST impacting soil – case closed January 1996 but residual contamination may remain in soil.
47*	Yuba San Jose, Inc.	20000 Monterey Highway	Reported disposal of contaminated soil from site cleanups.

Notes:

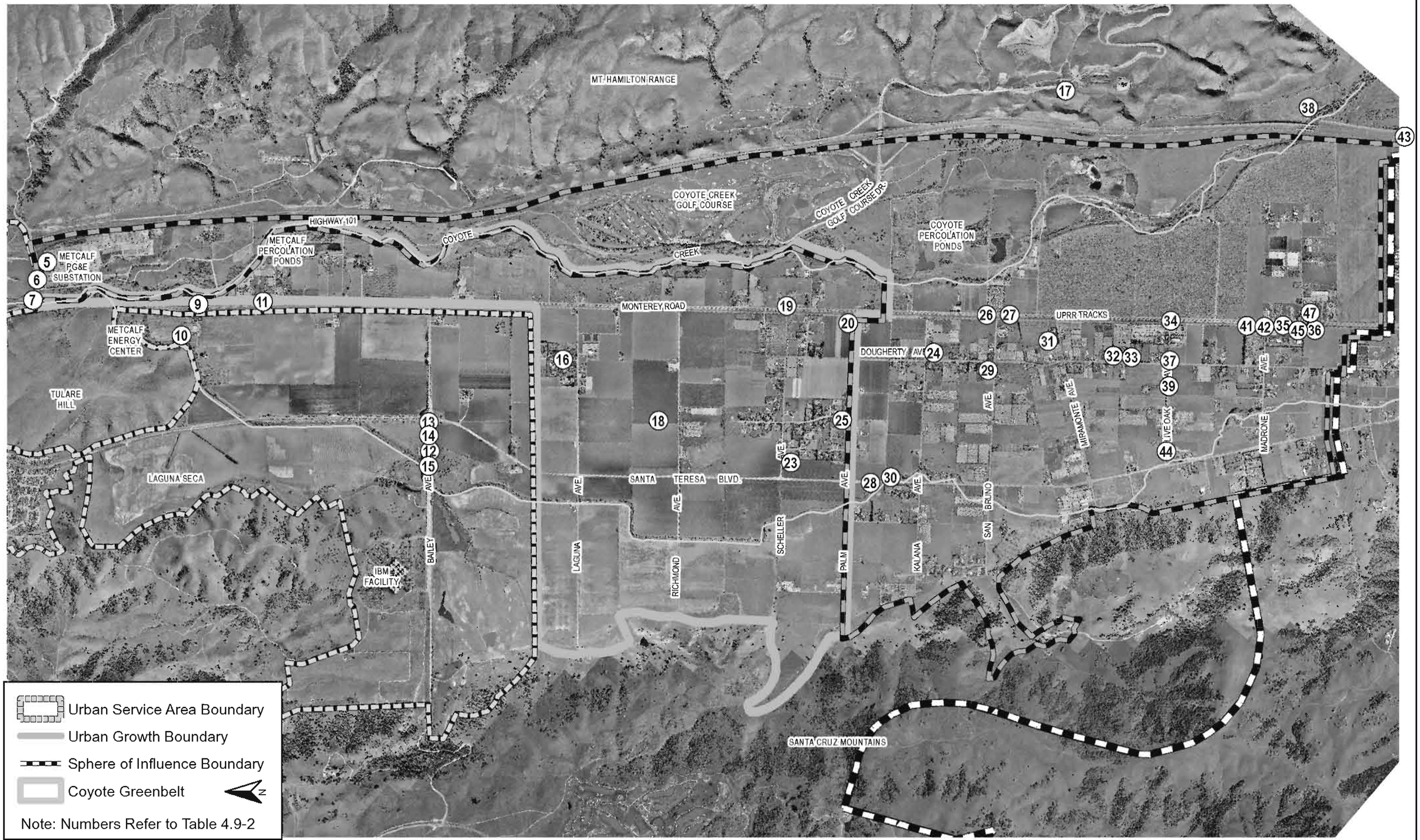
LUST = Leaking Underground Storage Tank
AST = Aboveground Storage Tank
UST = Underground Storage Tank

Site Locations:

▫ = Development Area
* = Greenbelt Area
º = Outside CVSP Area

Source: TRC Lowney, 2006.

As shown in Table 4.9-2, the databases surveyed show that storage, use, or generation of hazardous materials occurs on several of the sites within the CVSP Area. While the storage, use, or disposal of hazardous materials at a site can result in contamination of soil and/or groundwater, this is not always the case. For this reason, thorough site reconnaissance and soil and groundwater (if soil is impacted) testing would be necessary to determine if these properties have been affected by hazardous materials. Of the approximately 29 sites that are documented as being users/generators of hazardous materials or having above or underground storage tanks within the CVSP Area, approximately 13 are within the CVSP Development Area, 15 are within the Greenbelt Area, and one is outside of the CVSP Area, as shown in Table 4.9-3.



SITES WITH POTENTIAL HAZARDOUS MATERIALS CONCERNS

FIGURE 4.9-1

Approximately 17 of the sites in Table 4.9-2 have documented leaking underground storage tanks (LUSTs). All but one of these sites has undergone remediation and the cases have been closed; however, residual contamination may remain in the soil. The remaining case is pending. Of the 17 sites with LUSTs, approximately eight are located in the CVSP Development Area and nine are located in the Greenbelt. These sites are generally the past locations of gas stations and the past and/or present locations of industrial and agricultural uses. The sites with known leaking underground storage tanks (LUST) are noted in Table 4.9-2 and described below. The remaining sites are either landfills, or sites of hazardous materials concerns. One site was noted in the database as having stained soils.

TABLE 4.9-3:
HAZARDOUS MATERIALS USERS

Location	Number of Users or Generators of Hazardous Materials	Number of LUSTs
Outside CVSP Area	1	0
In Greenbelt	15	9
In Development Area	13	8
Total	29	17

Source: TRC Lowney, 2006.

4.9.2.4 *Soil Testing Results*

A soil quality evaluation was completed for the CVSP Development Area to determine general soil quality. The evaluation included collecting surface soil samples from agricultural areas, along the railroad tracks, along Monterey Road and Santa Teresa Boulevard (for aerially deposited lead), and from proposed CVSP school locations. Sampling results from past studies completed in the CVSP Development Area (primarily in the northern portion) were also reviewed, are included in Appendix K, and are summarized below.

Analytical results of soil and groundwater samples were compared to the Environmental Screening Level concentrations (ESLs) in a residential land use setting to obtain a conservative evaluation of soil quality. ESLs are not a "clean-up standard" and the presence of a chemical at a concentration exceeding an ESL does not necessarily indicate that adverse impacts to human health or the environment are occurring; exceeding ESLs indicates that the potential for impacts may exist and that additional evaluation may be needed.

Agricultural Areas

To determine the impact of historical agricultural practices in the CVSP Development Area and provide general information on the distribution of pesticide-impacted soils, previous soil samples taken primarily in the North Coyote Valley Campus Industrial area were reviewed. In addition, approximately 63 soil samples were taken on accessible properties within the CVSP Development Area. These sites are shown on Figure 2 in Appendix K.

The samples were collected and analyzed for organochlorine pesticides and pesticide associated metals (arsenic, lead, and mercury). As shown in Table 3 of Appendix K, total DDT (the sum of DDD, DDE, and DDT) concentrations ranged from less than 0.002 to 2.85 parts per million (ppm) within the CVSP Development Area. While residential ESLs for total DDT have not been

established, ESLs have been established for the pesticides that are included in total DDT. In the samples taken, DDE exceeding residential ESLs were found in one sample taken north of Laguna Avenue and east of Monterey Road. In addition, DDE exceeding California's hazardous waste criteria (TTLC) of one ppm was detected in three samples, including the one north of Laguna Avenue and east of Monterey Road (the same location noted above) and at two other locations south of Richmond Avenue. This impacted soil is not considered a hazardous waste under the federal Resource Conservation and Recovery Act (RCRA) or California regulatory requirements because it is undisturbed and not in the process of being discarded. However, once the soil is excavated for disposal, it could be classified as a hazardous waste. For these reasons, further characterization of these soils prior to development is recommended.

Dieldrin was detected in four samples taken for the proposed project and one sample taken for the previous CVRP project. Residential ESLs for dieldrin were exceeded at one site, located north of Richmond Avenue.

Toxaphene was detected in several soil samples collected as part of a previous study (for the CVRP project) in the Laguna Seca area of the northern portion of the CVSP Development Area. This area is proposed to be excavated and used as a storm water detention basin. The RWQCB has approved soil mixing during excavation to reduce contaminant concentrations. Levels of lead and mercury detected in this area did not exceed residential ESLs.

Based on the analytical results, the concentrations of arsenic, lead, and mercury found are representative of typical background concentrations of 10 ppm to 20 ppm, 11 ppm, and less than one ppm, respectively. Lead and mercury levels did not exceed the residential ESLs. Due to naturally occurring arsenic in the Bay Area, concentrations of arsenic were above ESLs in many samples within the CVSP Development Area. The site-specific range of background concentrations is within the range of regional background criteria (less than 10 ppm) according to the Department of Toxic Substances Control (DTSC) and the US Environmental Protection Agency (USEPA). Therefore, the concentrations of arsenic detected are not significant.

Railroad Tracks

Six soil samples for total petroleum hydrocarbon in the gasoline, diesel, and motor oil range, polychlorinated biphenyls (PCBs), organochlorine pesticides, and pesticide related metals were collected along the existing Southern Pacific/Caltrain tracks. As shown in Table 2A of Appendix K, laboratory analysis generally detected low levels of diesel and motor oil range petroleum hydrocarbons in some of the samples, but no gasoline range petroleum hydrocarbons were detected in any samples. In addition, no PCBs were detected. None of the results exceeded their respective residential ESLs.

Soil samples analyzed contained generally low concentrations of pesticides and related metals. Lead and mercury concentrations were also detected in low concentrations and are generally representative of background conditions and did not exceed residential ESLs. Arsenic was detected in four of the six samples, above background conditions. Further sampling of these areas prior to development is recommended.

Roadways

A total of 13 soil samples were collected and tested for total lead; seven were collected along Monterey Highway and six were collected along Santa Teresa Boulevard. These samples were generally collected within 15 feet of the roadways in the upper half foot of soil to determine the presence of aerially deposited lead associated with the historical use of leaded gasoline. As shown in

Table 3 of Appendix K, average concentrations were below residential ESLs for lead, with concentrations being higher along Monterey Road than along Santa Teresa Boulevard. One site located along Monterey Highway had a lead level much higher than any of the other samples. While the level of lead was below the residential ESLs in this sample, further testing is recommended prior to development to characterize soil conditions because levels could exceed California's hazardous waste concentration criteria.

School Sites

Naturally occurring asbestos (NOA) is classified as a hazardous substance under both federal and state regulations. Based on these regulations, the California Department of Toxic Substances Control (DTSC) requires response actions at existing and proposed school sites were NOA has been identified. For schools requiring state funding, the California Education Code (§17210) mandates that school districts complete environmental assessments and cleanups. DTSC evaluates these assessments and requires mitigation or remediation for protection of human health and the environment if the concentration of NOA in soils at proposed school sites exceeds 0.001%.

Soil samples were collected at 12 proposed school sites within the CVSP Development Area. NOA (as Chrysotile) was detected in four of the samples collected at the school sites above DTSC screening levels. The source of the NOA is likely due to weathering of serpentine materials located in the hillsides located to the east and west of the CVSP Development Area. Further sampling and characterization of the soils in the vicinity of the school sites where NOA was detected is recommended to determine the extent of contamination.

4.9.2.5 *Other Potential Hazards*

Lead/Asbestos

Historically, older structures and fences were commonly painted with lead-based paints. Lead-based paint is a major source of lead poisoning for children and can also affect adults. In children, lead poisoning can cause irreversible brain damage and can impair mental functioning. In adults, it can cause irritability, poor muscle coordination, and nerve damage to the sense organs and nerves controlling the body. In 1978, the Consumer Product Safety Commission banned the use of lead as an additive in paint. Due to the age of structures within the CVSP Development Area, it is anticipated that lead paint may be encountered during demolition or alteration of these structures. Lead is also present in near surface soils along heavily traveled roadways, as a result of the use of leaded gasoline for several decades.

Asbestos-containing materials (ASMs) may be present in older buildings within the CVSP Development Area. Asbestos is commonly found in floor tiles, building materials, and insulation. Damage to these materials can result in the release of asbestos fibers into the air (the asbestos then becomes "friable"). The inhalation of friable asbestos fibers can result in serious diseases (including cancer), of the lungs and other organs. Demolition or alteration of structures containing asbestos could result in the release of friable asbestos.

As previously described in Section 4.7, *Geology*, NOA is present in soils within the CVSP Development Area. School sites were tested, as described above in Section 4.9.2.4. Naturally-occurring chrysotile asbestos fibers released into the air could pose a health hazard to construction workers and nearby residents. Breathing airborne asbestos has been correlated with increased frequency of some types of cancer and has been related to some types of lung disease.

Electromagnetic Fields

Electric current traveling in transmission lines produces both electric and magnetic fields, and some studies have found an association between exposure to electric and magnetic fields and health problems. In recent years there has been considerable controversy regarding the potential health effects resulting from long-term exposure to electromagnetic fields (EMFs). While EMFs occur naturally and are present in everything from visible light to radio waves to X-rays, attention has focused on whether exposure to EMFs associated with alternating-current electricity is hazardous.

The strength of an EMF is dependent upon the amount of current flow; the more power being consumed, the stronger the EMF. The electric field strength component of EMF falls off dramatically with distance and can be shielded by trees or structures. The magnetic field component of EMF is produced as a result of the movement (current) of electricity through a conductor. As with electric fields, magnetic field strength decreases dramatically with distance from the source; however, the magnetic field component passes through most materials so magnetic fields cannot be effectively shielded by normal building materials.

Hundreds of laboratory and epidemiological studies have been completed on the relationship between EMF exposure and health effects. Because magnetic fields cannot be effectively shielded, most health-related research has focused on the potential hazards associated with the magnetic field component of EMFs. Scientists to date have found no threshold value, dose response, or causative relationship that demonstrates evidence of any adverse physical effect from EMF.

The City of San José does not have any setback requirements in place related to EMF. The only statewide mandate of any kind that has been established is the State of California School Siting Rules. The policy requires that schools be sited a minimum of: 1) 100 feet from the right-of-way edge of a 100/115 kV line; 2) 150 feet from the right-of-way edge of a 220/230 kV line; and 3) 250 feet from the edge of the easement of any 345 kV and higher voltage transmission line.

There are existing high voltage PG&E lines in the CVSP Development Area, including those associated with the Metcalf Electricity Substation located northeast of the project site.

Wildland Fires

The rural hillside areas adjacent to the northwestern and southwestern boundaries of the Development Area are classified as "Wildland Area That May Contain Substantial Forest Fire Risks and Hazards" on the *Santa Clara County Natural Hazard Disclosure [Fire] Map* (California Department of Forestry and Fire Protection, 2000). The hillsides are primarily annual grasslands and oak woodland habitat with oak trees concentrated along drainages.

4.9.3 Hazards and Hazardous Materials Impacts

4.9.3.1 *Thresholds of Significance*

For the purposes of this EIR, a hazardous materials impact is considered significant if the project would:

- create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials; or
- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or

- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school; or
- construct a school on a property that is subject to hazards from hazardous materials contamination, emissions or accidental release; or
- create a significant hazard to the public or the environment from existing hazardous materials contamination by exposing future occupants or users of the site to contamination in excess of soil and ground water cleanup goals developed for the site; or
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation route; or
- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

The following discussion of hazardous materials impacts is divided into four categories; 1) short-term construction-related impacts; 2) impacts to the CVSP Development Area from surrounding land uses resulting from past and/or present use, storage, or generation of hazardous materials; 3) impacts to future land uses in the CVSP Development Area resulting from past and/or present use, storage, or generation of hazardous materials; and 4) impacts associated with developing future residential uses in proximity to future research and development (R&D) uses within the CVSP Development Area.

4.9.3.2 *Short-term Construction-related Impacts*

The implementation of the CVSP would require the demolition of a variety of structures, including residential, commercial, and industrial (greenhouse) buildings. Since these structures may contain lead-based paint and/or asbestos-containing building materials, construction workers could be exposed to these hazardous substances during demolition.

There is always a potential to encounter fill materials during construction that could contain hazardous materials. These materials could be hazardous to nearby sensitive receptors and construction workers during site grading and excavation. Similarly, grading and construction of the proposed project would result in the airborne release of naturally-occurring asbestos fibers which would significantly impact construction workers and nearby residents.

While the database search indicated the location of LUSTs, additional underground tanks could potentially be located within the CVSP Development Area. Hazardous fill materials could also be encountered during construction. These tanks and fill materials could contain materials that would be hazardous to construction workers if they were to inadvertently encounter them during site excavation and/or grading.

Impact HAZ-1: The proposed project could result in the exposure of construction workers and/or nearby sensitive receptors to the release of hazardous materials, including naturally-occurring asbestos, underground tanks, and fill materials during construction. **[Significant Impact]**

4.9.3.3 *Impacts from Surrounding Development*

Based upon known information, as previously described in Section 4.9.2, there are approximately 31 locations outside of the CVSP Development Area where either: 1) hazardous materials are used or generated; 2) underground storage tanks have leaked, or 3) other hazardous materials conditions exist. As previously described, sites listed as being users or generators of hazardous materials may

not be affected by uses on the site. None of these sites are located adjacent to the CVSP Development Area boundary.

All but one of the sites with LUSTs have been remediated and closed in accordance with all local, state, and federal laws and regulations. The one open case is pending. The sites with past LUSTs are located primarily in the Greenbelt area to the south of the CVSP Development Area. Given the distances to these sites and their remediation status, soils and groundwater potentially affected by the LUSTs would have a low probability of affecting future uses proposed for the CVSP Development Area. This is a less than significant impact.

The Kirby Canyon Landfill is located east of US 101, approximately 1.25 miles from the edge of the CVSP Development Area. Although it does not accept hazardous waste, it is listed in the databases as being of a moderate threat to groundwater quality if a release were to occur from the facility. Since the landfill is separated from the Development Area by topography, Coyote Creek, and US 101, the potential for a release to impact the Development Area is low.

Impact HAZ-2: Impacts associated with past and existing hazardous materials contamination in the areas surrounding the CVSP Development Area would be less than significant. **[Less than Significant]**

4.9.3.4 *Impacts to Future Development from Past Uses within the Development Area*

Regulatory Database

As discussed in Section 4.2, the regulatory databases list approximately 13 facilities located within the CVSP Development Area that are either current or past users and/or generators of hazardous materials. As previously described, listing as a user or generator of hazardous materials does not necessarily mean that contamination has occurred on the site. An additional eight sites have had Leaking Underground Storage Tanks. All of these cases have been closed in accordance with local, state and federal regulations; however, as noted in Table 4.9-1, residual contamination may remain in the soil and/or groundwater. If these sites are proposed for residential uses, this would be considered a significant impact.

Impact HAZ-3: The construction of sensitive land uses on sites within the CVSP Development Area with past and existing hazardous materials contamination would result in significant adverse environmental impacts. **[Significant Impact]**

Soil Testing

As previously described, soil sampling was done for various parcels within the CVSP Development Area to characterize soil conditions in the primarily agricultural area. Since concentrations of pesticides in excess of residential ESLs were detected in soil samples taken on various accessible agricultural parcels within the CVSP Development Area, there is a potential for future residents to be exposed to hazardous materials in concentrations that are potentially hazardous to human health

Soil sampling was also completed at accessible parcels along the existing CalTrain/Southern Pacific Railroad tracks. With the exception of arsenic, none of the levels detected for hazardous materials were in excess of residential ESLs. Therefore, residential uses proposed for areas near the railroad tracks could be exposed to arsenic in concentrations that are potentially hazardous to human health.

Soil sampling was also completed along Monterey Road and Santa Teresa Boulevard to determine lead levels along these roadways. Levels of lead detected were below levels that would be considered potentially hazardous for a sensitive land use such as residential. While only accessible parcels were sampled, future residential land uses along these roadways are not expected to result in significant impacts to future residents from lead poisoning.

Soil sampling for naturally occurring asbestos (NOA) was also completed at 12 proposed school locations within the CVSP Development Area. Detection of NOA at levels that exceed DTSC screening criterion for school sites was reported. Therefore, future students at these locations could be exposed to levels of NOA above state guidelines.

Impact HAZ-4: Soil testing on accessible sites in the CVSP Development Area found that levels of contaminants in excess of residential ESLs are present on some sites that may be proposed for sensitive uses such as residences and schools. The construction of these uses on sites with contamination would be a significant impact. **[Significant Impact]**

4.9.3.5 *Hazardous Material Impacts within the Development Area after Construction*

Implementation of the CVSP would include the construction of residential uses in proximity to workplace uses as shown on Figure 2.0-1. Workplace uses would include research and development (R&D) uses that could use, store, and/or generate hazardous materials as part of their day-to-day operations. The use and/or storage of these materials could pose off-site hazards in the event of an accidental release. However, the proposed project has been designed to minimize potential hazardous materials/land use compatibility impacts associated with placing residential and public uses (schools) near R&D uses. In particular, school sites have been designated in the CVSP as being a minimum of 1,000 feet from any proposed R&D use and are located primarily in residential neighborhoods as shown on Figure 2.0-1.[44]

Standard compliance with the regulations summarized in Table 4.9-1 will further minimize this potential hazardous materials/land us compatibility impact. In addition, all new development will adhere to the City of San José's Residential and Industrial Design Guidelines, which require setbacks from industrial uses and buffers between R&D and sensitive uses.

Impact HAZ-5: The proposed project has been designed to minimize impacts associated with placing sensitive land uses adjacent to uses that may use or store hazardous materials. Compliance with the requirements of the various regulatory agencies and implementation of the City's Residential and Industrial Design Guidelines would reduce these impacts to a less than significant level. **[Less than Significant Impact]**

4.9.3.6 *Interference with Emergency Evacuation/Response Plans*

The urban development associated with the proposed CVSP would not impair implementation of, or physically interfere with, any emergency response/evacuation plans. This statement is based on the fact that the project will not close or modify any roadways that would be used for such purposes. Further, the streets included within all new urban development proposed by the CVSP will comply with the City's design standards pertaining to emergency access.

[44] *Draft Coyote Valley Specific Plan*, City of San José, December 2006, page 59, 3.a.

Impact HAZ-6: The proposed project would not interfere with existing or future emergency evacuation/response plans. **[No Impact]**

4.9.3.7 *Electromagnetic Fields*

As previously described, the City of San José does not have any setback requirements in place related to EMF. CEQA advises that a project's impact is significant if it creates a potential public health hazard. EMF cannot currently be regarded as such a potential impact, due to the lack of substantial evidence in research findings. Without any conclusive scientific evidence regarding the health effects of EMF, and without relevant adopted standards, there is no basis at this time to conclude that future residents or workers within the CVSP Development Area would be exposed to potentially significant EMF-related hazards.

In an effort to deal with the uncertainty of EMF, several utility companies and some government jurisdictions have addressed the EMF issue through "prudent avoidance". Prudent avoidance serves to limit public exposure to EMF through planning and design measures involving relatively small investments of money and effort. The California State Board of Education standard for schools (typically the most rigorous standard) is to set buildings back 100 feet from the transmission line right-of-way.

Future implementation of the CVSP would include the undergrounding of utilities to the extent practicable. The CVSP does not include the development of residential units in proximity to the existing Metcalf PG&E substation. Therefore, existing and future electric transmission facilities would not significantly impact future CVSP residences or workers.

Impact HAZ-7: The proposed project would include the undergrounding of future electric transmission lines and sufficient setbacks from existing electric transmission facilities. Therefore, the project would not be subject to significant EMF impacts. **[Less than Significant Impact]**

4.9.3.8 *Risks Associated with Wildland Fires*

The CVSP does not include the development of hillsides above the 15% slope line. Therefore, the risks to people and structures from a wildland fire on the adjacent hillsides would not be significant. This statement is based on the fact that: 1) adequate fire protection will be available (see Section 5.1, *Fire Protection*); 2) structures will utilize fire-resistant building materials (e.g., Class "A" roofing materials); and 3) the street and circulation system will comply with City design standards pertaining to emergency access.

Impact HAZ-8: The proposed project does not include hillside development that would be at risk from wildland fires. **[Less than Significant Impact]**

4.9.4 Mitigation and Avoidance Measures for Hazards and Hazardous Material Impacts

As previously described, the policies in the City of San José's 2020 General Plan have been adopted for the purpose of avoiding or mitigating environmental effects resulting from planned development within the City. Future CVSP development projects shall be subject to these General Plan policies, as well as the following standard measures to mitigate environmental impacts. Additional or modified mitigation measures may be identified based on subsequent environmental review, once specific development is proposed.

4.9.4.1 ***Construction Phase Mitigation Measures***

MM HAZ-1.1, 2.1, 3.1, and 4.1: Prior to environmental clearance for a development permit for a parcel within the CVSP Development Area, the City of San José will require that a Phase I site assessment be completed by a qualified professional (e.g , a California-registered environmental assessor). The study will identify current and historical land uses or conditions that may have resulted in a release of hazardous materials into the environment, or impact the proposed development of the site. The assessment will be performed in conformance with standards adopted by American Society for Testing Materials (ASTM) for Phase I site assessments. The Phase I site assessment shall identify any limitations to development due to the presence of hazardous materials in the vicinity of the subject site, and present recommendations for further investigation of the site, if necessary.

MM HAZ-1.2, 2.2, 3.2, and 4.2: If a Phase I site assessment indicates that a release of hazardous materials could have affected the site, the City's Environmental Compliance Officer shall require that additional soil and/or groundwater investigation be done by a qualified environmental professional to assess the presence and extent of contamination at the site. Soil and groundwater investigations would conform to State and local guidelines and regulations.

MM HAZ-1.3, 2.3, 3.3, and 4.3: If results of the subsurface investigation(s) indicate the presence of hazardous materials, site remediation shall be required by the applicable State or local regulatory agencies. Depending on the nature of contamination, remediation may consist of soils removal, groundwater extraction/treatment, or modification to site planning and building design to minimize risks of exposure. Specific remedies would depend on the extent and magnitude of contamination and the requirements of the regulatory agencies. Contaminated soils/materials shall be transported and disposed of per all applicable local, state, and federal laws and regulations.

MM HAZ-1.4, 2.4, 3.4, and 4.4: For any site where contamination has been identified, the City shall require that construction only occur in accordance with a site-specific health and safety plan prepared by a certified industrial hygienist. The plan should include provisions for monitoring exposure to construction workers and delineate procedures to be undertaken in the event that contamination is identified above action levels and identify emergency procedures and responsible personnel. The presence of lead-based paint or asbestos-containing materials at the site may require additional site-specific safety procedures to minimize adverse effects. Construction workers at contaminated sites would need to receive hazardous materials training in accordance with Federal and State regulations.

MM HAZ 1.5: The key to reducing the potential for significant asbestos emissions during subsurface activities in serpentine rock is dust control. If good dust control is maintained, asbestos emissions can be kept well below potential impact

levels. For locations within the CVSP Development Area with serpentine soils, the following dust control measures will be implemented:

- Each area proposed for work that may contain asbestos shall be sufficiently moisture conditioned before beginning work to minimize dust emissions during excavation and grading. If dust is observed, additional water must be applied.
- Water applied for dust control purposes can be treated with a small amount of a biodegradable wetting agent to increase dust suppression.
- All working surfaces (including haul roads and other roads subject to traffic) on material potentially containing asbestos shall be kept sufficiently moist so that visible dust is not emitted during grading or driving.
- Travel speeds of grading equipment and vehicles traveling in the grading area on-site must be limited.
- The exposed surface of loads transported on-site by scraper or truck must be kept sufficiently moist to minimize potential dust/asbestos emissions.
- Equipment operators must avoid excessive disturbance of asbestos-containing material such as overfilling of scrapers or pushing material over the sides of stockpiles.
- If significant downwind asbestos emissions are expected, given the location of the work and the wind directions, at least one of the following options must be implemented: limit the duration of the work as long as wind conditions are adverse, work at another location upwind from the area of concern, or erect a mist curtain downwind of the work area.

MM HAZ 1.6: Asbestos surveys will be completed for buildings to be demolished that were constructed prior to 1980 as required under National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines. In addition, NESHAP guidelines require that all potentially friable asbestos-containing materials be removed prior to building demolition.

MM HAZ 1.7: A lead survey of painted surfaces and soil around buildings built prior to 1978 will be completed prior to demolition. Requirements in the California Code of Regulation will be followed during demolition activities, including employee training, employee air monitoring and dust control. Any debris or soil containing lead-based paint or coatings will be disposed of at landfills that meet acceptance criteria for the waste being disposed.

MM HAZ 3.5: The Regional Water Quality Control Board and DTSC are responsible for overseeing cleanup of contaminated soils and water and for overseeing development activities on contaminated sites. While the identified sites have been closed, the City of San José shall require Risk Management Plans, Remediation, or Clearance Letters approved by these agencies should additional sites be discovered during further site review prior to construction.

MM HAZ 4.5: DTSC is responsible for assessing, investigating, and clean-up for proposed school property sites. All proposed school site locations that receive state funding for acquisition or construction will be required to undergo rigorous environmental review and a clean-up process under DTSC's oversight.

MM HAZ 5.1: If future uses on redeveloped parcels were to involve the use, storage, or disposal of hazardous materials, the site operator will be required to comply with Federal, State, and local requirements for managing hazardous materials. Depending on the type and quantity of hazardous materials, these requirements could include the preparation of, implementation of, and training in the plans, programs, and permits described previously under Program Mitigation.

MM HAZ 5.2: All facilities that use or store specified quantities of toxic or flammable substances that can have off-site consequences if accidentally released will be required by the state to prepare a Risk Management Plan to be reviewed by the County of Santa Clara's Department of Environmental Health.

MM HAZ 5.3: A Hazardous Materials Business Plan is generally required by the City of any facility which generates specified quantities of hazardous materials. All facilities must also adhere to the requirements of the City's Toxic Gas Ordinance.

MM HAZ 5.4: The routine emission of hazardous materials is regulated by the Bay Area Air Quality Management District (BAAQMD) which implements programs to identify and reduce public exposure. These programs include preconstruction review of projects that have the potential to emit hazardous materials.

MM HAZ 5.5: The state regulates facilities that may emit hazardous materials within 1,000 feet of schools. The governing board of the school district in which a school is proposed is required to make findings regarding health risks from nearby facilities and corrective measures required before a school is occupied.

MM HAZ 5.6: All future R&D uses will be required to comply with all applicable General Plan policies and design guidelines in regards to appropriate setbacks and buffers.

4.9.5 Conclusions Regarding Hazards and Hazardous Materials Impacts

Impact HAZ-1: The proposed project could result in the exposure of construction workers and/or nearby sensitive receptors to the release of hazardous materials during construction. Implementation of the mitigation measures described above (MM HAZ-1.1 through 1.7) will reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact HAZ-2: Impacts associated with past and existing hazardous materials contamination in the areas surrounding the CVSP Development Area would be less than significant. Mitigation measures as described above (MM HAZ-2.1 through 2.4) would further reduce these impacts. **[Less than Significant]**

Impact HAZ-3: The construction of sensitive land uses on sites within the CVSP Development Area with past and existing hazardous materials contamination would result in significant adverse environmental impacts. Potential hazards will be mitigated as described above (MM HAZ-3.1 through 3.5) and according to all local, state, and federal laws and regulations prior to construction, as previously described. Should it be determined that a proposed land use is not appropriate for a site given its hazardous materials condition, alternative sites will be considered. **[Less than Significant Impact with Mitigation Incorporated]**

Impact HAZ-4: Soil testing on accessible sites in the CVSP Development Area found that levels of contaminants in excess of ESLs are present on some sites that may be proposed for sensitive uses such as residences and schools. Potential hazards will be mitigated as described above (MM HAZ-4.1 through 4.5) and according to all local, state, and federal laws and regulations prior to construction, as previously described. Should it be determined that a proposed land use is not appropriate for a site given its hazardous materials condition, alternative sites will be considered. **[Less than Significant Impact with Mitigation Incorporated]**

Impact HAZ-5: The proposed project has been designed to minimize impacts associated with placing sensitive land uses adjacent to uses that may use or store hazardous materials. Compliance with the requirements of the various regulatory agencies and implementation of the City's Residential and Industrial Design Guidelines and the above described mitigation measures (MM HAZ-5.1 through 5.6) would reduce these impacts to a less than significant level. **[Less than Significant Impact]**

Impact HAZ-6: The proposed project would not interfere with existing or future emergency evacuation/response plans. **[No Impact]**

Impact HAZ-7: The proposed project would not be subject to significant EMF impacts. **[Less than Significant Impact]**

Impact HAZ-8: The proposed project does not include hillside development that would be at risk from wildland fires. **[Less than Significant Impact]**